

PATENT

Attorney Docket No.: A-67207/DJB/RMS/DCF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

WALT et al.

Serial No. 08/944,850

Filed: October 6, 1997

For: SELF-ENCODING FIBER OPTIC  
SENSOR

) Examiner: Hannaher, C.

) Group Art Unit: 2878

*15/Suppl.  
IDS  
Sherson  
3-16-00*

CERTIFICATE OF MAILING

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Dated: Feb 11, 2000

Signed: *Suzan Lindstrom*

Suzan Lindstrom

SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner  
for Patents  
Washington, DC 20231

Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicant wishes to draw the attention of the U.S. Patent and Trademark Office to the references cited on the accompanying form PTO-1449. Copies of the references are enclosed. A fee under 37 C.F.R. §1.17(p) is also enclosed.

02/16/2000 MMARHOL 00000007 08944850

02 FC:126

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Serial No.: 08/944,850

Filed: October 6, 1997

None of the foregoing references are believed to disclose the invention as claimed. Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application. Submission of the present document shall not be construed as an admission that a search has been made or that better art does not exist.

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1300 (Our Order No. A-67207/DJB/RMS/DCF).

An additional copy of this Information Disclosure Statement is enclosed.

Respectfully submitted,

FLEHR, HOHBACH, TEST,  
ALBRITTON & HERBERT

Dated: February 11, 2000

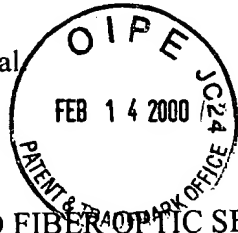
David C. Silva Reg. No.: 44,685  
for Robin M. Silva  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David R. Walt, et al  
Serial No.: 08/944,850  
Filed: October 6, 1997  
For: SELF-ENCODED FIBER OPTIC SENSOR



Group Art Unit: 1313  
Examiner: Unknown  
Docket No.: TU-97-01

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on 19 January 1999 R. Dennis Creehan  
Date R. Dennis Creehan

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, DC 20231

EJ478962617US

Sir:

In the above-referenced patent application, the Applicant respectfully submits the enclosed Information Disclosure Statement with copies of the cited references under 37 C.F.R. 1.97(b). The Applicant respectfully requests that the information disclosed herein be made of record in this application.

Respectfully submitted,

19 January 1999  
Date

R. Dennis Creehan  
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TOE - J. HALL RUSH

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 4

**Complete If Known**

|                        |                 |
|------------------------|-----------------|
| Application Number     | 08/944,850      |
| Filing Date            | October 6, 1997 |
| First Named Inventor   | D.R. Walt       |
| Group Art Unit         | 1313            |
| Examiner Name          | Not Assigned    |
| Attorney Docket Number | TU97-01         |

**U.S. PATENT DOCUMENTS**

| Examiner<br>Initials <sup>1</sup> | Cite<br>No. <sup>1</sup> | U.S. Patent Document |                                      | Name of Patentee or Applicant<br>of Cited Document | Date of Publication of<br>Cited Document<br>MM-DD-YYYY | Pages, Columns, Lines,<br>Where Relevant<br>Passages or Relevant<br>Figures Appear |
|-----------------------------------|--------------------------|----------------------|--------------------------------------|--|--|--|
|                                   |                          | Number               | Kind Code <sup>2</sup><br>(if known) |  |  |  |
|                                   | AA                       | <del>5690894</del>   |                                      | Pinkel, et al.                                     | 11/25/97   |  |
|                                   | AB                       | <del>5496997</del>   |                                      | Pope   | 3/5/96   |  |
|                                   | AC                       | <del>5573909</del>   |                                      | Singer, et al.                                     | 11/12/96   |  |
|                                   | AD                       | <del>4499052</del>   |                                      | Fulwyer  | 2/12/85  |  |
|                                   | AE                       | <del>5028545</del>   |                                      | Soini  | 7/2/91   |  |
|                                   | AF                       | <del>5252494</del>   |                                      | Walt   | 10/12/93   |  |
|                                   | AG                       | <del>5114864</del>   |                                      | Walt   | 5/19/92  |  |
|                                   | AH                       | <del>5633972</del>   |                                      | Walt, et al.                                       | 5/27/97  |  |
|                                   | AI                       | <del>5512490</del>   |                                      | Walt, et al.                                       | 4/30/96  |  |
|                                   | AJ                       | <del>5320814</del>   |                                      | Walt, et al.                                       | 6/14/94  |  |
|                                   | AK                       | <del>5298741</del>   |                                      | Walt, et al.                                       | 3/29/94  |  |
|                                   | AL                       | <del>5250264</del>   |                                      | Walt, et al.                                       | 10/5/93  |  |
|                                   | AM                       | <del>5254477</del>   |                                      | Walt   | 10/19/93   |  |
|                                   | AN                       | <del>5244813</del>   |                                      | Walt, et al.                                       | 9/14/93  |  |
|                                   | AO                       | <del>5244636</del>   |                                      | Walt, et al.                                       | 9/14/93  |  |
|                                   | AP                       | <del>5143853</del>   |                                      | Walt, et al.                                       | 9/1/92   |  |
|                                   | AQ                       | <del>4822746</del>   |                                      | Walt   | 4/18/89  |  |
|                                   | AR                       | <del>5002867</del>   |                                      | Macevich   | 3/26/91  |  |
|                                   | AS                       | <del>5814524</del>   |                                      | Walt, et al.                                       | 9/29/98  |  |
|                                   | AT                       | <del>5105305</del>   |                                      | Betzig, et al.                                     | 4/14/92  |  |

**FOREIGN PATENT DOCUMENTS**

| Examiner<br>Initials <sup>1</sup> | Cite<br>No. <sup>1</sup> | Foreign Patent Document |                     |                                      | Name of Patentee or<br>Applicant of Cited Document | Date of Publication of<br>Cited Document<br>MM-DD-YYYY | Pages, Columns, Lines,<br>Where Relevant<br>Passages or Relevant<br>Figures Appear | T <sup>3</sup> |
|-----------------------------------|--------------------------|-------------------------|---------------------|--------------------------------------|--|--|--|----------------|
|                                   |                          | Office <sup>3</sup>     | Number <sup>4</sup> | Kind Code <sup>5</sup><br>(if known) |  |  |  |                |
|                                   | FA                       | WO                      | <del>9714928</del>  | A                                    | Luminex Corp.                                      | 4/17/97  |  |                |
|                                   | FB                       | WO                      | <del>9302360</del>  | A                                    | Transmed Biotech Inc.                              | 2/4/93   |  |                |
|                                   | FC                       | WO                      | <del>8911101</del>  | A                                    | Michael John Holmes                                | 11/16/89   |  |                |
|                                   | FD                       | EP                      | <del>0723146</del>  | AI                                   | SRI International                                  | 7/24/96  |  |                |
|                                   | FE                       | EP                      | <del>0470319</del>  | AI                                   | Toshiba  | 4/1/92   |  |                |
|                                   | FF                       | EP                      | <del>0269764</del>  | AI                                   | Molecular Biosystems                               | 6/8/88   |  |                |
|                                   |                          |                         |                     |                                      |  |  |  |                |
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Examiner  
SignatureDate  
Considered

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<sup>2</sup> Unique citation designation number. <sup>3</sup> See attached Kinds of U.S. Patent Documents. <sup>4</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup> Applicant is to place a check mark here if English language Translation is attached.

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|   |   |    |   | Application Number       | 08/944,850      |
|   |   |    |   | Filing Date              | October 6, 1997 |
|   |   |    |   | First Named Inventor     | D.R. Walt       |
|   |   |    |   | Group Art Unit           | 1313            |
|   |   |    |   | Examiner Name            | Not Assigned    |
|   |   |    |   | Attorney Docket Number   | TU97-01         |
| Sheet   | 2 | of | 4 |                          |                 |

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| Examiner<br>Signature |  | Date<br>Considered |  |
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Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

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Sheet 3 of 4

## **Complete if Known**

|                        |                 |
|------------------------|-----------------|
| Application Number     | 08/944,850      |
| Filing Date            | October 6, 1997 |
| First Named Inventor   | D.R. Walt       |
| Group Art Unit         | 1313            |
| Examiner Name          | Not Assigned    |
| Attorney Docket Number | TU97-01         |

## **OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials <sup>1</sup> | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issu number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|--------------------------------|-----------------------|--|----------------|
| LA                             |                       | E.J.A. Pope, "Fiber Optic Chemical Microsensors Employing Optically Active Silica Microspheres", SPIE, v2388,p245-256 (1995)   |                |
| LB                             |                       | J.I. Peterson, et al., "Fiber Optic pH Probe for Physiological Use", Anal. Chem., v52, no 6, May 1980, p864-869  |                |
| LC                             |                       | Anonymous, "Fluorescent Microspheres", Tech Note 19, Bang Laboratories, (Fishers, IN) February 1997  |                |
| LD                             |                       | L.B. Bangs, "Immunological Applications of Microspheres", The Latex Course, Bangs Laboratories (Carmel, IN) April 1996   |                |
| LE                             |                       | Anonymous, "Microsphere Selection Guide", Bangs Laboratories (Fishers, IN) September 1998  |                |
| LF                             |                       | J.A. Ferguson, et al., "A Fiber-Optic DNA Biosensor Microarray for the Analysis of Gene Expression", Nature Biotechnology, v. 14, pp 1681-1684 (December 1996)   |                |
| LG                             |                       | B.G. Healey, et al., "Fiber Optic DNA Sensor Array Capable of Detecting Point Mutations", Analytical Biochemistry, v. 251, no. 2, pp270-279 (1997)   |                |
| LH                             |                       | B.G. Healey, et al., "Development of a Penicillin Biosensor Using a Single Optical Imaging Fiber", SPIE Proc., v. 2388, pp 568-573 (1995)  |                |
| LI                             |                       | B.G. Healey, et al., "Improved Fiber-Optic Chemical Sensor for Penicillin, Anal. Chem, v. 67, no. 24, pp 4471-4476 (December 15, 1995)   |                |
| LJ                             |                       | D.R. Walt, "Fiber-Optic Sensors for Continuous Clinical Monitoring", Proc. IEEE, v.80, no.6, pp903-911 (June 1992)   |                |
| LK                             |                       | N.J.C. Strachan, et al., "A Rapid General Method for the Identification of PCR Products Using a Fibre-Optic Biosensor and Its Application to the Detection of Listeria", Ltrs. Applied Microbiology, v. 21, pp 5-9 (1995)                                      |                |

Examiner Signature

Date Considered

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| <b>Application Number</b>     | 08/944,850      |
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| <b>First Named Inventor</b>   | D.R. Walt       |
| <b>Group Art Unit</b>         | 1313            |
| <b>Examiner Name</b>          | Not Assigned    |
| <b>Attorney Docket Number</b> | TU97-01         |

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|       |   |    |   |
|-------|---|----|---|
| Sheet | 4 | of | 4 |
|-------|---|----|---|

[illegible]Date  
Considered

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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